22 June 2004

Dr. Seth Willey
U.S. Fish and Wildlife Service
Ecological Services
P.O. 25486
Denver Federal Center
Denver, Colorado 80225

Dear Dr. Willey:

I have completed the review of the report “Testing the Taxonomic Validity or Preble’s Meadow Jumping Mouse (*Zappus hudsonius* (*Z*. *h*.) *preblei*). Please find the review and my CV attached.

Thanks for allowing me to be part of the review process. Sorry I took a little longer than promised.

Sincerely,

Robert D. Bradley
Associate Professor

This is an excellent piece of work on a controversial issue. I like the way the authors set up the study by specifically testing a series of hypotheses related to the bigger picture. That way any rejecting leads to a valid conclusion. My assessment is based simply on the data provided – I have no prior experience with this taxon. My review is constructed along the lines of the questions provided in the cover letter.

1. The data presented do support the synomyzing *Z. h. campestris* and *Z. h. preblei*. Both the morphological and mtDNA analyses are convincing in that the two taxa actually represent a single taxon.

2. I could support the placement of the two taxa in synomy without further data. Nuclear data would be nice – but is not necessary given the clear pattern in morphological and mitochondrial data.

3. Ecological, physiological, or behavioral differences are or would be extremely important in building a case that *Z. h. preblei* is significantly different from *Z. h. campestris*. For example, if one of the two taxa occurs only at high elevations and the other at low elevations; or if one occupies a forested area and the other occupies a grassland. In the absence of significant differences concerning ecological, physiological, or behavioral patterns between the two taxa; in my opinion, these parameters are of lesser importance.

4. Reproductive isolation is always a tough call. They may be physically isolated due to changing distribution patterns and by default reproductively isolated. However, if the two taxa were to become sympatric then they may or may not be reproductively isolated. My guess from the data and distribution is that the two are not reproductively isolated. The best example is with the mtDNA data.

5. It does not appear that that loss of *Z. h. preblei* would significantly impact *Z. h. campestris* in terms of genetics. However, it appears that the range or distribution might be impacted given the isolated nature of *Z. h. preblei*.